Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) A method of forming a stacked device filler, comprising:

forming a layer of first material between two substrates of a stacked device;

forming a layer of second material between the two substrates of the stacked device, wherein the second material causes a reaction in a portion of the first material.

2. (Previously Presented) The method of claim 1, wherein the reaction comprises polymerization.

3. (Previously Presented) The method of claim 1, wherein said forming the layer of first material comprises diffusing the first material between a portion of the two substrates of the stacked device.

4. (Previously Presented) The method of claim 3, wherein the first material is selected from the group consisting of: diisocyanate monomers, a diisocyanate end-capped compliant oligomer, and p-toluenesulfonyl semicarbazide.

5. (Previously Presented) The method of claim 1, wherein said forming the layer of first material comprises one or more of:

injecting the first material between a portion of the two substrates of the stacked device,

spraying the first material between the portion of the two substrates of the stacked device, or

immersing the two substrates of the stacked device in the first material.

6. (Previously Presented) The method of claim 1, wherein forming the layer of second material comprises diffusing the second material between a portion of the two substrates of the stacked device.

7. (Previously Presented) The method of claim 6, wherein the second material is selected from the group consisting of: water, a hydroxyl end-capped oligomer, and a carboxylic acid end-capped polymer.

8. (Previously Presented) The method of claim 1, wherein said forming the layer of second material comprises one or more of:

injecting the second material between a portion of the two substrates of the stacked device,

spraying the second material between the portion of the two substrates of the stacked device, or

immersing the two substrates of the stacked device in the second material.

9. (Previously Presented) The method of claim 1, wherein the reaction produces a polymer foam.

10. (Previously Presented) A method of forming a stacked semiconductor device, comprising:

forming a layer of material on a portion of the top surface of a substrate, said substrate having an interconnect structure formed thereon;

selectively removing a portion of the layer of material to expose a portion of a top surface of the interconnect structure;

combining the substrate with another substrate to form a stacked semiconductor device;

causing a reaction in a portion of the layer of material wherein a portion of the area between the two substrates is filled with a polymer foam as a product of the reaction.

11. (Original) The method of claim 10, wherein the reaction comprises polymerization.

12. (Original) The method of claim 10, wherein said forming comprises spin coating.

13. (Previously Presented) The method of claim 12, wherein the layer of material is spin coated to a thickness greater than the top surface of the interconnect structure.

14. (Previously Presented) The method of claim 10, wherein the selective removing comprises one or more of: chemical etch, dry etch, or mechanical etch.

15. (Canceled)

16. (Previously Presented) The method of claim 10, wherein the layer material is selected from the group consisting of: water, hydroxyl end-capped oligomers, and carboxylic acid end-capped polymers.

17. (Canceled)

18. (Withdrawn) A stacked microelectronic device, comprising:

a first substrate of silicon, said substrate having a top surface;

a plurality of interconnect structures formed on at least a portion of the substrate;

a layer of material formed on at least a portion of the top surface of the substrate of silicon;

a second substrate of silicon with a plurality of interconnect structures formed thereon, said first and second substrate interconnect structures configured such

that at least a portion of the interconnect structures of said first and second substrate respectively are in physical contact.

19. (Withdrawn) The apparatus of claim 18, wherein the layer of material substantially comprises a polymer foam.

20. (Withdrawn) The apparatus of claim 19, wherein the polymer foam comprises one or more of: polystyrene, polyester, and polyurethane.

21. (Withdrawn) The apparatus of claim 18, wherein the layer of material substantially comprises one or more of: diisocyanate monomers, a diisocyanate end-capped compliant oligomer, and p-toluenesulfonyl semicarbazide

22. (Withdrawn) The apparatus of claim 18, wherein the layer of material substantially comprises one of: water, a hydroxyl end-capped oligomer, and a carboxylic acid end-capped polymer.

23. (Withdrawn) The apparatus of claim 18, wherein the apparatus comprises a stacked chipset.

24. (Withdrawn) The apparatus of claim 18, wherein the first and second substrates comprise integrated circuits.

25. (Withdrawn) The apparatus of claim 18, wherein at least a portion of the interconnect structures comprise copper vias.

26. (Previously Presented) A method of forming a stacked device filler, comprising:

forming a layer of material between two substrates of a stacked device; and

reacting a portion of the layer of material, wherein the reaction results in the portion of the layer of material increasing in volume.

27. (Original) The method of claim 26, wherein the reaction comprises polymerization.

28. (Canceled)

29. (Previously Presented) The method of claim 27, wherein the reaction produces a polymer foam.

30. (Previously Presented) A method comprising:

depositing a first material between two substrates of a stacked device;

depositing a second material between the two substrates of the stacked device;

wherein a reaction between the first material and the second material fills a portion of the area between the two substrates with a polymer foam as a product of the reaction.

31. (Previously Presented) The method of claim 30, wherein depositing the first material comprises one of:

diffusing the first material into a portion of the area between the two substrates;

injecting the first material into the portion of the area between the two substrates;

spraying the first material into the portion of the area between the two substrates; or

immersing the two substrates in the first material.

32. (Previously Presented) The method of claim 30, wherein the first material is selected from the group consisting of diisocyanate monomers, a diisocyanate end-capped compliant oligomer, and p-toluenesulfonyl semicarbazide.

33. (Previously Presented) The method of claim 30 wherein depositing the second material comprises one of:

diffusing the second material into a portion of the area between the two substrates;

injecting the second material into the portion of the area between the two substrates;

spraying the second material into the portion of the area between the two substrates;

or

immersing the two substrates in the second material.

34. (Previously Presented) The method of claim 30, wherein the second material is selected from the group consisting of water, a hydroxyl end-capped oligomer, and a carboxylic acid end-capped polymer.

35. (Previously Presented) A method comprising:

forming a layer of material on a substrate including an interconnect structure formed thereon;

removing a portion of the layer of material to expose a top surface of the interconnect structure;

combining the substrate with another substrate;

filling the area between the two substrates with a polymer foam as a product of a reaction in the layer of material.

36. (Previously Presented) The method of claim 35, the reaction in the layer of material further comprising polymerization.

37. (Previously Presented) The method of claim 35, forming the layer of material further comprising forming the layer of material to a thickness greater than the top surface of the interconnect structure.

38. (Previously Presented) The method of claim 35, wherein the layer material is selected from the group consisting of water, hydroxyl end-capped oligomers, and carboxylic acid end-capped polymers.